



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0421; Directorate Identifier 2013-NM-003-AD; Amendment 39-17701; AD 2013-25-05]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 737-300, -400, and -500 series airplanes. This AD was prompted by fuel system reviews conducted by the manufacturer. This AD requires, depending on airplane configuration, replacing fuel pump power control relays with new relays having a ground fault interrupter (GFI) feature, installing ground studs and a bonding jumper, doing certain bonding resistance measurements, and changing the GFI relay position. This AD also requires revising the maintenance program to incorporate certain airworthiness limitations. We are issuing this AD to prevent damage to the fuel pumps caused by electrical arcing that could introduce an ignition source in the fuel tank, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Georgios Roussos, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6482; fax: 425-917-6590; email: [georgios.roussos@faa.gov](mailto:georgios.roussos@faa.gov).

#### **SUPPLEMENTARY INFORMATION:**

##### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. The NPRM published in the Federal Register on May 16, 2013 (78 FR 28764). The NPRM proposed to require, depending on airplane configuration, replacing fuel pump power control relays with new relays having a ground fault interrupter (GFI) feature, installing ground studs and a

bonding jumper, doing certain bonding resistance measurements, and changing the GFI relay position. The NPRM also proposed to require revising the maintenance program to incorporate certain airworthiness limitations.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (78 FR 28764, May 16, 2013) and the FAA's response to each comment.

### **Support for the NPRM**

Boeing concurred with the content of the proposed rule.

### **Request to Include Certain Instructions and Delete Certain Step**

All Nippon Airways (ANA) requested that we include instructions for the removal and installation of certain relay sockets, and for removal of paint on the mounting panel under Step 5 of Figure 5 of Boeing Alert Service Bulletin 737-28A1212, Revision 2, dated October 18, 2012. ANA stated that without removal of the paint on the mounting panel, the required bonding resistance measurements cannot be obtained. In addition, ANA requested that we delete step 6 of Figure 5 of Boeing Alert Service Bulletin 737-28A1212, Revision 2, dated October 18, 2012, which describes removal of paint around the relay cutout. ANA stated that paint removal around the relay cutout is not needed since the relay sockets are mounted to the cutout area of the panel and the relays are a spacer-mounted type.

We disagree with providing additional instructions that would expand the scope of this final rule, requiring additional notice and comment. We find that delaying this action would be inappropriate in light of the urgency of the identified unsafe condition. Operators should note that a general AMOC, which was requested by Boeing on behalf of all operators, has been issued for AD 2011-12-09, Amendment 39-16716 (76 FR 33988, June 10, 2011). The AMOC provides essentially the same relief as that requested

by the commenter. Once this final rule is effective, we may issue a similar AMOC. Any person may request approval of an alternative method of compliance (AMOC) under the provisions of paragraph (l) of this AD for procedures that help them meet the bonding resistance requirements. We have not changed this final rule in this regard.

## Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 28764, May 16, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 28764, May 16, 2013).

## Costs of Compliance

We estimate that this AD affects 14 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replace fuel pump power control relays, install ground studs and a bonding jumper, and do certain bonding resistance measurements, and change the GFI relay position, depending on airplane configuration	Up to 31 work-hours X \$85 per hour = \$2,635	Up to \$21,338	Up to \$23,973	Up to \$335,622
Maintenance program revision	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$1,190

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2013-25-05 **The Boeing Company**: Amendment 39-17701; Docket No. FAA-2013-0421; Directorate Identifier 2013-NM-003-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

Certain requirements of this AD terminate certain requirements of AD 2011-12-09, Amendment 39-16716 (76 FR 33988, June 10, 2011).

#### **(c) Applicability**

This AD applies to The Boeing Company Model 737-300, -400, and -500 series airplanes; certificated in any category; identified as Groups 5, 6, 7, and 9 in Boeing Alert Service Bulletin 737-28A1212, Revision 2, dated October 18, 2012.

#### **(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 2822, Fuel boost pump.

**(e) Unsafe Condition**

This AD was prompted by fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent damage to the fuel pumps caused by electrical arcing that could introduce an ignition source in the fuel tank, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Installation of Ground Studs and Bonding Jumper and Fuel Boost Pump Relays Replacement**

For airplanes in Groups 5, 6, 7, and 9, Configuration 1, as identified in Boeing Alert Service Bulletin 737-28A1212, Revision 2, dated October 18, 2012 (airplanes on which Boeing Alert Service Bulletin 737-28A1212 was not done): Within 60 months after the effective date of this AD, install ground studs and a bonding jumper, replace fuel boost pump relays, and do certain bonding resistance measurements, in accordance with Part 1 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-28A1212, Revision 2, dated October 18, 2012. Doing the actions required by this paragraph terminates the requirements of paragraph (g) of AD 2011-12-09, Amendment 39-16716 (76 FR 33988, June 10, 2011), for airplanes in Groups 5, 6, 7, and 9, Configuration 1 only, provided that the requirements of paragraph (g) of this AD are done at the time given in AD 2011-12-09.

**(h) Ground Studs and Bonding Jumper Installation and GFI Relay Position Change**

For airplanes in Groups 5, 6, 7, and 9, Configuration 2, as identified in Boeing Alert Service Bulletin 737-28A1212, Revision 2, dated October 18, 2012 (airplanes on which Boeing Alert Service Bulletin 737-28A1212, dated July 23, 2009 was done): Within 60 months after the effective date of this AD, install ground studs and a bonding jumper, change the GFI relay position, and do certain bonding resistance measurements,

in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-28A1212, Revision 2, dated October 18, 2012. Doing the actions required by this paragraph terminates the requirements of paragraph (h) of AD 2011-12-09, Amendment 39-16716 (76 FR 33988, June 10, 2011), for airplanes in Groups 5, 6, 7, and 9, Configuration 2 only, provided that the requirements of paragraph (h) of this AD are done at the time given in AD 2011-12-09.

**(i) Ground Fault Interrupt (GFI) Relay Position Change**

For airplanes in Groups 5, 6, 7, and 9, Configuration 3, as identified in Boeing Alert Service Bulletin 737-28A1212, Revision 2, dated October 18, 2012 (certain airplanes on which Boeing Alert Service Bulletin 737-28A1212, Revision 1, dated August 27, 2010 was done): Within 60 months after the effective date of this AD, change the GFI relay position and do certain bonding resistance measurements, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-28A1212, Revision 2, dated October 18, 2012.

**(j) Maintenance Program Revision**

Concurrently with accomplishing the actions required by paragraph (g), (h), or (i) of this AD, or within 30 days after the effective date of this AD, whichever occurs later: Revise the maintenance program by incorporating Airworthiness Limitation 28-AWL-22 of Boeing 737-100/200/200C/300/400/500 AWL and Certification Maintenance Requirements (CMRs), Document D6-38278-CMR, Revision August 2012. The initial compliance time for the actions specified in AWL 28-AWL-22 of Boeing 737-100/200/200C/300/400/500 AWL and Certification Maintenance Requirements (CMRs), Document D6-38278-CMR, Revision August 2012, is within 1 year after accomplishing the installation required by paragraph (g), (h), or (i) of this AD, or within 1 year after the effective date of this AD, whichever occurs later.



**(k) No Alternative Actions, Intervals, and/or Critical Design Configuration Control Limitations (CDCCLs)**

After accomplishing the revision required by paragraph (j) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (l) of this AD.

**(l) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (m) of this AD. Information may be emailed to:

[9-ANM-Seattle-ACO-AMOC-Requests@faa.gov](mailto:9-ANM-Seattle-ACO-AMOC-Requests@faa.gov).

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(m) Related Information**

For more information about this AD, contact Georgios Roussos, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6482; fax: 425-917-6590; email: [georgios.roussos@faa.gov](mailto:georgios.roussos@faa.gov).

**(n) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Service Bulletin 737-28A1212, Revision 2, dated October 18, 2012.

(ii) Airworthiness Limitation 28-AWL-22 of Boeing 737-100/200/200C/300/400/500 AWL and Certification Maintenance Requirements (CMRs), Document D6-38278-CMR, Revision August 2012. Page 1.0-33, where Airworthiness Limitation 28-AWL-22 is listed, is dated May 2009.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on December 4, 2013.

John P. Piccola,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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